PECULIARITIES OF OOGENESIS IN HYBRIDOGENETIC EUROPEAN WATER FROG COMPLEX (*Pelophylax esculentus* COMPLEX)

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Hybridogenesis represents one of known clonal ways by which interspecies hybrids can be reproduced. During hybridogenesis, gametogenesis proceeds with deviations, when one of the parental genomes can be eliminated while the other one can be endoreduplicated. Among natural interspecies hybrids, *Pelophylax esculentus* as a hybrid between P. ridibundus (RR genome, n=13) and *P. lessonae* (LL genome, n=13) serves as an appropriate model for studying of hybridogenesis. To study the features of female gametogenesis associated with hybridogenesis we analyzed the karyotypes transmitted in growing oocytes of di- and triploid *P. esculentus*.

We characterized oocyte karyotypes of 9 diploid (RL) and 14 triploid (11 frogs with RRL genotype and 3 – with LLR genotype) hybrid females with genome composition being determined by DNA flow cytometry. Genomes transmitted in oocytes of hybrid frogs were identified according to differences between sets of lampbrush chromosomes. We found that 9 triploid RRL hybrids produced oocytes with 13 bivalents similar to P. ridibundus chromosomes while oocytes of triploid RLL frogs contained 13 bivalents identical to *P. lessonae* chromosomes. Thus, in germ cells of the majority of triploids, genome represented in one copy was eliminated, while two remaining genomes formed 13 bivalents. Most diploid hybrids produced oocytes with 13 bivalents, 26 bivalents and 26 univalents similar to *P. ridibundus* chromosomes. To form such oocytes, genome of *P. lessonae* was eliminated in germ cells of diploid hybrids while genome of *P. ridibundus* was endoreduplicated ones or even two times. In oocytes of two triploid RRL frogs we observed 39 bi- and univalents where 26 bi- or univalents identical to *P. ridibundus* chromosomes and 13 bi- or univalents corresponded to *P. lessonae* chromosomes. Three diploid hybrids produced oocytes with 26 bivalents and 26 univalents, where either 13 bi- or univalents corresponded to chromosomes of each parental species. To form 39 bivalents in oocytes of triploid frogs and 26 bivalents with chromosomes of both parental species in oocytes of diploid frogs, whole genome endoreduplication should have been occurred. Neither endoreduplication nor elimination occurred during oogenesis to form oocytes with 39 univalents in triploid frogs and 26 univalents with chromosomes of both parental species in diploid hybrids.

The results obtained allow to evaluate presence of endoreduplication and elimination during gametogenesis in *P. esculentus* females.

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